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# CATECHISM OF FACTS,

OR

## PLAIN AND SIMPLE RULES

RESPECTING THE

NATURE, TREATMENT, AND PREVENTION

OF

## CHOLERA.

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BY A. B. GRANVILLE,

M. D., F. R. S., F. L. S., F. A. S., F. G. S., M. R. I., &c. &c.

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PHILADELPHIA:

E. L. CAREY & A. HART.

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1832.

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SKERRETT—NINTH STREET,  
PHILADELPHIA.

## PREFACE.

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IN all communities there exist, at least, as many people who are regardful of their health, as there are who care nothing at all about it, and never think of it. But in the present emergency of a threatened epidemic visitation, all must feel equally anxious to save themselves and their kindred from the effects of a disease so frequently fatal, and at all times fearful. They therefore look to those individuals who, being willing, can instruct them as to the best mode of preserving their health, by every means that can be placed within their reach. Hence have arisen the many able works with which we have of late been so abundantly supplied, concerning

the expected disease, (a disease which has already shown itself in one of the maritime towns,) and the precepts by which we hope to ward off its attacks. Hence also the various schemes of instruction addressed to the less enlightened classes of the community, which have appeared, either in the daily journals, or in the form of cheap essays on the same subject. But there are circumstances about the nature and spirit of those publications which defeat their object in a great measure. These arguments prevailed on the author, and he forthwith undertook the task which he has this day brought to a conclusion.

Following always the plan of a catechism, the author has entered into a popular statement and explanation of whatever regards that most important question—throwing into this the whole weight of his experience and reflection, however insig-

nificant in degree, especially with reference to that long disputed, but now happily settled point, of the real nature and character of cholera, which has reference to sanitary laws and regulations. As staunch an advocate, as any physician who has seen the disease may be, for the doctrine of contagion in plague, which the author successfully supported in various writings, when brought in question some years ago in this country; the author looked with almost personal jealousy on the attempt now made of forcing into an unnatural marriage with that doctrine, a disease which four-fifths of the people of Europe, and a large proportion of those of Asia and Africa have, through dear-bought experience, and personal observation, learned to view only as the spontaneous offspring of celestial and terrestrial phenomena acting on the animal system in each geographical district, independently of each other, and without the necessity of

inter-communication. That the author did so view this attempt, must seem natural enough, seeing that had the attempt really succeeded, though only for a time, the true and salutary doctrine of contagion, as applied to the plague of the Levant, would, once more, have been exposed to the ridicule of the general unbelievers in any thing like contagion. The thanks of all those who coincide in these sentiments are due to many of the author's brethren in the profession, for their effectual and repeated efforts to enlighten the public on this point; but to none more so than to Dr. James Johnson, a very talented physician, and to the anonymous Birmingham physician, who communicated his opinions through the *Lancet*.

If, after the perusal of the present treatise, in its unpretending garb of a catechism, wherein truths and facts are conveyed by

means of questions and answers, in the most popular form—it should be said, that the leisure hours of a physician might have been better employed on a more dignified subject—the author's reply will be, that no mode, however humble, of conveying instruction to the people on the subject of their health, without technicalities, can be considered as beneath the attention of any medical man, whatever may be his rank or degree in the profession.

16, Grafton Street, Berkeley Square,  
18th November, 1831.



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A

## CATECHISM OF FACTS, &c.

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### FIRST SECTION.

WHAT IS CHOLERA? IS THERE A SPECIFIC DISEASE OF THAT NAME OF FOREIGN ORIGIN, WHICH HAS NEVER APPEARED IN ENGLAND?

Q. In these times of great popular alarm at the possible appearance, among us, of a pestilential scourge, said by many authors and periodical writers, to be even more fatal and appalling than the plague itself, would it not be adding to the benefit which society cannot fail to derive from the simple rules for the preservation of health contained in your Catechism, if you were to give us a plain statement of the nature of this malady, the best mode of preserving ourselves from its attacks, and the treatment to be adopted for its cure, most likely to be successful?

A. The alarm which has been excited about CHOLERA, and the ravages it commits, is indeed great, and I will be free to say, unnecessarily exaggerated. Those who have been instrumental in exciting it, have but ill served the cause which led them to adopt such a step, and will find their own intentions defeated. Nothing predisposes us to become affected by prevailing epidemic disorders sooner than terror.

Q. Do you mean that more alarm has been excited, than there was any occasion for, by the particular character which those writers have given to the disease itself, with respect to its nature and fatal termination; or do you intend to apply your observation to the strict measures which the government has adopted at the suggestion of those individuals who were consulted upon the subject?

A. I allude to both those sources of popular terror, and I consider it to be the duty of every well-wisher to the community in the present emergency, to allay, if he have it in his power, the fever of the mind, which is, too frequently, the first stage of that of the body.

Q. What is *cholera*?

A. The name given to a disease prevalent from time immemorial in every country in the civilized world, and making its appearance generally, and in its more ordinary form, at the close of the summer, during the autumn, or in the rainy season.

Q. Does the name itself imply any thing that has a reference to the nature of the disease?

A. Not at all. The name is derived from two Greek words, the one meaning *bile*, the other *to flow*, and is meant to imply that this is a bilious disorder, or an overflow of bile—literally a *bile-flux*—a fact questionable in all species of cholera, but nearly disproved in that severer form of the disorder which is now occupying so much of the public attention.

Q. Then *cholera morbus* means no more or less than bilious disorder; as one would say bilious fever or bilious complaint?

A. Just so. And you will immediately perceive the incorrectness of the name, when you shall have been informed that in the severer form of cholera, except in a few cases,

bile does not make its appearance either at the outset or during the progress of the disease, but only at the commencement of the recovery.

Q. But I have also heard the severer form of this disease named *spasmodic* cholera and *Indian*, or *Asiatic* cholera: are those appellations more appropriate?

A. Neither of them is. The first would imply that *spasm* accompanies only the severer form of the disorder; whereas it is a symptom present in all species of cholera: while the second would equally mislead us, if it induced us to believe that the severer form of cholera is of Indian or Asiatic origin; for, cases of the most fatal description of cholera have, from time to time, occurred accidentally, as well as *epidemically* in all parts of the world, attended by every symptom which characterizes the cholera at present raging in Europe. In 1821, an expedition sailed from Trieste, under the command of Baron Schim-mellpenning, for the purpose of circumnavigating the globe. It was, I believe, the first that the Austrian government had ever sent

out on such an errand; but the accomplishment of its intention was thwarted by the spontaneous appearance of cholera, soon after the arrival of the expedition in warmer latitudes. It proved fatal, in a very short time, to nearly the whole of the crew, including the captain, and the celebrated botanist Bohms. In 1600, cholera, in its severest form, made the tour of Europe, and destroyed a very large proportion of those who were attacked by it. The same complaint is now following something like the same course.

Q. Then I am to understand, that *the Cholera* with which we are threatened as something new to this country, and against the expected importation of which from the continent, the London Gazette, of the 20th of October, contained sundry extraordinary rules and regulations, is only what is already known as cholera in England, or any where else, with this difference, that its symptoms are more severe, its progress more rapid, and its results more fatal?

A. Exactly so. Another difference be-

tween the two forms of the disease has been mentioned, which, however, I know from the experience even of the last few weeks, can no longer be relied upon as an indispensable and distinguishing symptom of the *two degrees* of cholera. It has been stated that bile flows freely from the first onset in the milder, and not at all in the severer form of cholera; but to this I have to oppose the fact of my having witnessed more than one case of the usual national cholera of the present season in London, in which the evacuations were totally destitute of bile, or at least of the colour of it, and resembled dirty mortar-water.

Q. Will you describe to me, in as plain terms as the clearness of the subject will admit, (avoiding all professional or technical terms which are not positively indispensable,) an attack of a more usual cholera of this or any other European country in the severest form in which it has ever been known to occur, whether in a few or many instances?

A. I will do so, and in order to do away

with the possibility of its being supposed that the description istaken from the disease now raging in Europe, instead of the disease as it has occurred from time to time in this country—I will simply translate to you the words of a great English physician, (Sydenham,) who witnessed a very severe species of cholera, which he tells us prevailed more epidemically in the year 1669 in London, than he ever remembered to have known before.

“The Cholera Morbus,” says Sydenham, “is easily known by the following signs: Immoderate vomiting and a discharge of *vitiated humours* by stool, with great difficulty and pain; violent pain and distention of the belly and bowels, heartburn, thirst, quick pulse, heat, and anxiety, and frequently a small and irregular pulse; great nausea and sometimes colliquative sweats; contraction of the limbs, fainting, coldness of the extremities, and *other symptoms*, which greatly terrify the attendants and often destroy the patient in twenty-four hours.”

Q. That is bad enough, and if many hun-

dred such cases occurred when Sydenham witnessed the disease, and the *patients were often destroyed in twenty-four hours by it*, no doubt but that the town must have been in a state of the greatest alarm, and the inhabitants might have fancied that they had the plague once more amongst them.

A. Precisely so; and this is what happens in all cases of ordinary disorders, whenever they assume a character of unusual malignity followed by death. The community, so afflicted, imagine that a new disease has made an irruption amongst them, which is believed to be foreign to the climate they inhabit, and to be multiplied by the intercourse of the healthy with the sick.

Q. Will you now proceed to describe the cholera as it may have appeared from time to time in this country, since the period in which Sydenham practised, in order that it may be ascertained whether the same complaint, with precisely the same symptoms, is to be found amongst the diseases incidental to the climate of England?

A. I will do so, taking my description

from a well-known and popular physician, from whose writings I collect the following symptoms as those of the severer form of English cholera: The attack is sudden; beginning with soreness, pain, distention, and sometimes contraction of the belly, with spasms of the muscles of that part, and of those of the calves of the legs, severe and frequent vomiting and purging, generally of a bilious character, heat, thirst, hurried respiration, frequent, weak, and fluttering pulse—when the disease proceeds with much violence, the spasm extends with great pain to most of the muscles of the body: these symptoms are followed by great depression, with cold clammy sweats, considerable anxiety, a hurried and short respiration, with a sinking and irregularity of the pulse, which quickly terminate in death, an event that not unfrequently happens in twenty-four hours. That such is the form of cholera which has appeared from time to time in this country, is proved not only by the above symptoms, given by a physician who had had ample opportunities of witnessing

the disease he described, but by his description having been adopted by several authors and compilers of medical works. The periodical journals of the country, particularly of this year, teem with fatal cases of cholera, illustrative of the above description, and of that of Sydenham.

Q. Does the cholera with which we are threatened, then, differ from either of those in the train of its symptoms?

A. You shall judge for yourself. As I have, for reasons obvious in a work of this kind, given the description of the severer form of cholera, as it occasionally appears amongst us, in *general terms*; I shall adopt the same course in offering you a description of the severer form of cholera, as it has, from time to time, and particularly of late years, appeared in India, and very recently in several countries in Europe. I shall omit, as wholly unnecessary, all those minute touches of the descriptive pen of the London Board of Health, who, in addressing an unprofessional public, presented it with so frightful and horror-inspiring a picture of

that disease; lending to it, as it were, a personal entity, assigning a birth-place to it on the heated shores of the Ganges in 1817, and making it stalk, like Satan, over the extended regions of the earth, from India to Hamburg, with death and desolation in its train. My authority for the following series of symptoms is the report of the Medical Board of Bombay. Giddiness, nausea, violent vomiting and purging of a *watery, streaky, whey-coloured or greenish fluid*, severe cramp of the fingers and toes, legs, thighs, and muscles of the belly, constriction and oppression of the stomach, great sense of internal heat, inordinate thirst, pulse almost imperceptible, or so weak as to give to the fingers only an indistinct feeling of fluttering—respiration laborious and hurried—skin cold, clammy, and covered with large drops of sweat—great prostration of strength, anguish, and agitation—and death takes place generally within eighteen or twenty hours. These symptoms agree with those given by the different authors who have written on the cha-

lera which appeared since in Russia and Poland.

Q. There is one very prominent sign in the disease you have described as occurring in England, in its severest and most fatal form, and in that which raged in India, Russia, or Poland, which is said to differ materially in each complaint. In the one case the matter ejected from the stomach and bowels is described to be bilious, in the latter to be like whey or water-gruel. Is that not a sufficient character of distinction between the two disorders?

A. In the first place I will beg you to remark, that in the description given by Sydenham, no such mention of *bilious* vomiting is made—but that on the contrary he abstains from using the word bile in the case, (although he must have been well acquainted with the nature of bilious excretions, since he has described a bilious colic which prevailed in London in the succeeding year,) and uses the expression of *vitiated humours* instead—implying of course, that the humours thrown up, or which passed by

the bowels, were different from ordinary biliary evacuations. In the second place I have to observe, that even in cases of the severer form of cholera in India, Russia, and Poland, the peculiar whey or water-gruel-like evacuations were not always present, there being not unfrequently a tinge of bile among them. Mr. Scott, who drew up a medical report of this disease at Madras, says that in some cases the matter evacuated was of a *yellowish and greenish hue*. So that it would appear as if in the severer form of English cholera, bile was not always present in the matter ejected, and that in the same form of foreign cholera, on the contrary, bile was occasionally present. Hence the distinction is not permanent. Within the last few weeks I have seen a case of severe English cholera, in which the patient narrowly escaped from death, where the matter ejected was exactly like dirty mortar-water without a particle of bile in it.

Q. But let us suppose the two symptoms of bile or no bile being present in the mat-

ter ejected to be constant, would that circumstance be sufficient to make the two disorders distinct from each other?

A. Decidedly not, for any practical purpose. The nature of the disease would remain the same; and as the severity of its form is only to be judged of by the accumulation of all the other symptoms, particularly those indicative of bodily suffering, and of impaired circulation, which exist alike in both the domestic and foreign malady—and as the treatment is to be shaped in each case according to the severity of those symptoms—the distinction attempted to be drawn on such a ground, between the English and foreign cholera, in their severer forms, is, to say the least, useless.

Q. Are there not some other distinguishing marks to be traced between the English and foreign severe cholera?

A. There may be in the intensity of some of the symptoms; but the same symptoms, both as to number and description, are present in the English as well as foreign cholera.

## SECOND SECTION.

IS CHOLERA A DISEASE THAT TRAVELS FROM PLACE TO PLACE, BEING CONVEYED BY MAN OR GOODS?

Q. What is a medical board?

A. A body of professional men, either appointed by a higher authority, or self-constituted, meeting for the purpose of watching over the interests of the profession, or the health of the public.

Q. You have mentioned a London Board of Health, is that a board such as you describe?

A. The London Board of Health is formed of several eminent physicians, appointed by direction of the Secretary of State for the Home Department, and charged with the specific duty of collecting information respecting the cholera which has been raging in Asia and Europe for several years, and of suggesting such means as are most likely to prevent its appearance amongst us, and to cure it, should it unfortunately make its appearance.

Q. What has been the result of their labours?

A. They have made several reports, which have been published, and in which they come to conclusions that the events of a few subsequent weeks have shown to have been precipitate; and they have recommended measures which the same events have proved to be useless and consequently unnecessary.

Q. What were those conclusions?

A. That the cholera which raged in India is a peculiar disease of itself, that it has been conveyed by men and through the agency of merchandise from one place to another on the continent of Asia and Europe, like the Levant plague, and that it will reach this country unless the strictest laws of quarantine are observed.

Q. What are the measures which they have recommended?

A. These are of two classes. The one preventive, the other sanitary.

Q. What are the preventive measures?

A. Strict maritime and inland quarantine regulations, or in a few words, regulations by

which the ports, and every inch of the coast of Great Britain are to be closed against the landing of travellers, or the introduction of merchandise coming from any foreign place or places, in which the severe form of cholera has been known to exist; and which regulations were likewise to extend to the shutting up of every town in England, the moment the disease made its appearance in it, to the enclosing of every house in which cholera showed itself, and to the abandoning of every poor unfortunate being who might be afflicted with the disorder, to the mercenary attendance of hired nurses, having previously put the black mark on his dwelling, by writing upon the outside either the word SICKNESS, or CAUTION in large letters.

Q. Have the Board taken pains to disseminate among the public these regulations and suggestions, as well as their notions and conclusions respecting the disease in question?

A. They have, and the government have assisted them in that respect by inserting their notions, conclusions, suggestions and regulations in the London Gazette, accompanied by

certain authoritative orders in conformity with those suggestions. · But this is not all, a worthy and most excellent physician, to whom humanity and the medical profession are deeply indebted, and who has been fast descending in the vale of years, taking up that identical Gazette for his text, has raised his voice of warning to the public, repeating and enlarging on the suggestions and conclusions of the Board of Health; while, on the other hand, a periodical publication, of much weight and extensive circulation, catching the zeal of those worthy individuals, has disseminated, with a tenfold intensity of language and absurdity, their doctrines and precepts.

Q. And what has been the result of these sayings and doings?

A. There has resulted from them a state of the greatest alarm in the mind of the public, scarcely to be believed—a perfect panic—a paralyzation of the common affairs of life—and such a mistaken position of the country; in regard to other countries in Europe in which cholera has not yet developed itself,

that England has been put out of the pale of nations by them, and all intercourse with her repudiated.

Q. Were the eminent physicians you mention, who composed the London Board of Health, personally acquainted with the particular disease which was to have guided their operations.

A. Not one of them had ever seen the disease which they had determined to look upon as a specific disorder, different from any we have ever had in this country; although most of them must of necessity have become acquainted, in the course of their practice, with the severe and fatal form of cholera occurring from time to time in England.

Q. Were these same members of the Board well and practically acquainted with the nature and effect of quarantine regulations, their necessity and happy result when applied to the warding off of the Levant plague?

A. There was the superintendent-general of quarantine, and the director-general of

the Army Medical Board\* who have seen the plague and know the effect of quarantine regulation, but none else, out of ten members, besides, including the secretary, had ever formed the slightest acquaintance with either.

Q. I marvel not, therefore, that, unacquainted with either the disease or the nature and effect of the regulations they were called upon to frame, the Board have fallen into the error of first frightening the public, and next of recommending measures, most of which being impracticable, must create confusion and distress, while, through the disappointment which they will necessarily lead to, they would be found injurious instead of beneficial.

A. *Lead* to, you say. Say rather *have led*: for in the case of Sunderland, the appearance of cholera in that town, within the last fortnight, has created a greater degree of sor-

\* A ludicrous mistake occurs in the list of the members of the Board, as prefixed by themselves in one of their reports. Sir James Macgregor is there styled "Director-General of the Army."

rowful disappointment in the nation than would otherwise have occurred.

Q. What had the Board promised to the public, the nonfulfilment of which could lead to such a disappointment?

A. The Board in their manifesto, the government in their orders in council, Sir Gilbert Blane in his warning to the British public, and, last and *most*, the Quarterly Review in their archi-absurd articles contained in the 91st number, had led the public to believe that if the quarantine laws were strictly enforced, the disease would not appear amongst us. Now the quarantine laws were strictly enforced in the port of Sunderland, to the great inconvenience of their trade, and had never, as it has since been officially asserted, been infringed; yet cholera in its worst form made its appearance in that town, destroying its victims in the same frightful proportion in which the same malady was destroying them on the neighbouring coast of the continent, and with precisely the same symptoms.

Q. What led the Board to make such a

promise, which has got them into so awkward a scrape?

A. A first and fatal error: that of supposing that severe and fatal cholera had never existed until it showed itself in India, in 1817; whereas even upon that point they are wrong, since the same disorder was described as fatally prevalent in the hospitals of Madras ten years before, under the vulgar and awful name of "*mort-de-chien*," (dogs-death, from the acute suffering of the patient:) and a second still more fatal error, that of supposing the disease to possess the character of the plague, and of being transmitted from one place to another through the agency of man or merchandise, in order to account for its successive development in various parts of Asia and Europe. Thus did these physicians reason. The cholera took its rise at the mouth of the Ganges; it went to China on the one side, and to Persia on the other: from thence to Russia, Poland, Austria, and Prussia. It is now at Hamburg, and if you do not prevent men and goods from being introduced into this

country, from that city, or any other where the cholera may be raging, the disease will be introduced along with them. What has happened? The introduction of men and goods were prevented, but not the appearance of the disease.

Q. What are we to conclude from that striking fact?

A. That cholera is not a *contagious* disorder, but an *epidemic* one: that it is not a transmitted malady, but one spontaneously evolved in the countries in which it has raged, and likely to do so in Holland, France, Italy, and other countries hitherto free from it, in the course of the next two years.

Q. I wish you would enable me, by some simple explanation, fully to comprehend the meaning of the two words you have just used—contagious and epidemic?

A. In the year 1819, having found it necessary to support and defend the very doctrine, as applied to the PLAGUE of the Levant, (then called into question by interested

or mistaken persons,\*) which I am now compelled to dispute as inapplicable to CHOLERA, I took pains to convey in plain language, illustrated by facts, the real meaning of those two words. I need only repeat, though in fewer words, what I then said, to make you understand the meaning of *contagious*, and *epidemic*.—"On the 29th of March, 1813, a vessel called the San Niccoldò arrived at Malta from Alexandria in Egypt, where the plague was raging at the time the vessel left that place. During the voyage, two men fell ill and died. At the moment of his arrival at Malta, the master of the San Niccoldò, together with the surviving part of the crew, appearing to be healthy, were allowed to disembark into the lazaretto, leaving their clothes behind, and undergoing several precautionary operations. The crew were provided with two

\*. See "A letter to the Rt. Hon. F. Robinson, M. P. (now Lord Goderich,) President of the Board of Trade, on the Plague and Contagion, with reference to the Quarantine Laws. By A. B. Granville. London, 1819."

separate apartments in the lazaretto, and the captain and his servant lived together in a third. The whole of them seemed to enjoy the most perfect health till the 1st of April, when the captain, while playing at ball, was suddenly seized with headache, giddiness, and other symptoms of the plague; and he died in the course of about thirty-six hours. The servant, who had assisted the two men lost during the voyage, and had subsequently attended his master during his illness ashore, was seized with similar symptoms at the same time; and died after a like interval:—they were both buried in the lazaretto. This event created some uneasiness amongst the inhabitants; but as the vessel had been sent back to Alexandria, and the most perfect health prevailed in the island, they soon began to congratulate themselves on their supposed escape. On the 19th of April a child died of a suspicious fever; on the 1st of May, the mother gave birth to another child, who died immediately after; and she herself expired before the next morning with tumours in both groins. A third

child and the father of this unfortunate family were next attacked with the complaint; and the latter, in particular, exhibited glandular swellings under the arms, and in the groins. The woman who had performed the office of midwife to the mother, on being visited by a person, her relative, on the 6th of May, was found to be dying of the same disease; to which the relation also fell a victim on the 17th. Thus from one individual to another, all of whom, it was proved, had reciprocally communicated with each other, and with part of the crew of the vessel, the complaint spread among the population, and ultimately committed those ravages which afflicted the island of Malta in the year 1813. Such is the portrait of **CONTAGION**; and the disease which follows such a course is **CONTAGIOUS**.

"A family is taken ill at a particular season of the year with any known disease. Another family or person is soon afterwards similarly affected: and many more follow under the same circumstances, until the greater part of the inhabitants of a town or district have,

more or less, experienced the same morbid influence on their system. The same occurrence may take place in a prison—a camp—an hospital—a manufactory—a ship :—the disease goes through its various stages, often unchecked by any effort that can be made to extinguish it. It disappears at last, and for a time, generally indefinite, does not occur again; or it reappears at uncertain epochs: or another disease takes its place, following the same course, affecting equally the greater number of the inhabitants of the place or district where it appears, and terminating at last in the same manner. A catarrh is known to have affected, at particular epochs, two-thirds of the inhabitants of a town. Carli, in his History of Verona, observes, that this disease had been so prevalent in 1438, that it overran the whole of Italy, and was principally fatal to children and old people. The influenza which prevailed in London in the year 1782, was of this class. The croup, the hooping-cough, &c. are known to make their appearance, some years, in particular places, where they attack indiscriminately, many

individuals. The former became so prevalent in some of the French provinces about the years 1809 and 1810, that Bonaparte offered a premium of 12,000 francs for the best treatise on that disease. An old physician, Sennertus, states, that a particular malignant fever with spasm afflicted the bishoprics of Cologne and Westphalia in 1596-7. While Mantua was besieged by the French army in 1796, upwards of 25,000 citizens and soldiers perished from a peculiar fever: yet after the French army entered that town, no case of that disease occurred, either amongst the inhabitants or the garrison. We read in the History of France, by Mezerai, that a peculiar sort of cough, with fever, attacked generally and indiscriminately all the old people in Paris, during the months of February and March, 1414, and that the name of *coqueluche* was given to it from a particular cap, called *coqueluchon*, used to keep off the cold air so pernicious in this complaint: nearly the same with that which has since appeared in Paris, called *Le Gripe*, which is reported to have affected 140,000 inhabitants.—During

the siege of Genoa in 1799, a petechial fever prevailed among the garrison and the inhabitants, the greatest part of whom felt its bad effects: some parts of the town seemed more exposed to the influence of this disease than others, and a very limited residence in those parts was sufficient to develope the disease in a healthy individual. The same occurred a few years later at Leghorn—and again at Malaga; in both which places, sleeping one night only in the town was followed by the disease. The fever which has been called the *typhus*, followed both in England and Ireland, in 1817 and 1818, the same course. Particular districts of a town, and even particular parts of the same house, seemed more liable to the development of the disease than others. The same is recorded of those febrile complaints which have prevailed in some parts of Ameriea within the last twenty years. Such again is not the history of contagious, but of EPIDEMIC diseases.

Q. But I frequently find the word *infectious* employed synonymously with that of *contagious*: is that correct?

A. It is a manifest error to do so; and I am sorry to say, an error by no means uncommon. In the very question which now agitates the country, the one word is confounded for the other. The Board of Health, like many other writers, have fallen into this error. I will illustrate the difference by quoting from the same work what is meant by the word *infectious*. "If, during the prevalence of *epidemic* diseases, the deaths be numerous, and the burials carelessly conducted; if there be a great want of cleanliness in the persons attending the sick, and the sick themselves; if the effluvia arising from diseased bodies are not quickly carried away by ventilation; and the healthy be forced to mix with the sick, breathing the atmosphere in which they linger, the disease may then become *infectious* from those causes." That is, persons in health, equally subject, with all the other residents in the place in which an epidemic disorder rages, to the influence which produces that disease, whatever that influence may be, will be the more liable to fall ill, in proportion as they

breathe an air unsuited to the healthy functions of life, in consequence of the accumulation of many sick, foul linen, animal excretions, intemperance, &c. causes which at all times would produce *any* disease in the human body; but which, in the case of an *epidemic* disorder being already prevalent, incline the bodies of the healthy to assume the particular form of the prevailing disorder, in preference.

Q. Then, in the case of *infectious* disorders, if I, being in health, touch or handle a patient, or his clothes, but take care to keep myself perfectly cleanly, in a clean and well ventilated apartment, and live temperately, need not be apprehensive of inevitably falling ill of that disease?

A. Certainly: and the more so if you preserve your mind free from terror, observe temperance, avoid fatigue, and alternations of heat and cold, and reject all spirituous and distilled liquors. This, however, is not the case with respect to contagious disorders. Touch but a patient of the plague, or any of the linen which has been used by him; con-

vey part of that linen to a distant spot, and let a healthy person connect himself with it, be they ever so cleanly, so temperate in their diet, so stout of heart and mind—ninety to one but such individuals will be affected by the disease. Not so with the cholera.

Q. I conclude that there must be exceptions to these general assertions?

A. There are, as in all general rules, and they arise from individual peculiarities of constitution, observable during the prevalence of both epidemic and contagious disorders.

Q. Let us then apply these principles and definitions to our present purpose. You would say that the cholera which has appeared in several parts of Europe and Asia, and which has since appeared on the coast of Great Britain, is an *epidemic* disorder spontaneously developed in each of those places, and not transmitted, like the plague of the Levant, from one place to another; and that, therefore, any regulation which would keep off the latter, would be found useless in warding off the former?

A. Just so; with the addition of this other position, that the cholera in question has been proved to be one and the same malady in all the places you allude to—and is only a severer form of a well known disease which has from time immemorial shown itself from year to year in a milder form in all those parts of the world. That I am correct in this assertion, is proved by the fact that neither Austria nor Russia have been able to keep off from their dominions this supposed intruder and traveller, although they employed for that purpose, *with augmented vigour and severity*, the very quarantine laws which have, all along, preserved them from any invasion of the plague—a disease acknowledged on all hands, and by the *choleric* contagionists as well, to be superlatively contagious, infinitely superior in that respect to cholera. Had the disease been a stranger to those regions, and being so unequivocally deemed contagious, had knocked for admission at their gates, as the plague has often done; the cautions and restrictive regulations which closed the doors effectu-

ally to the one for a long series of years, must have been as successful against the intrusion of a less contagious malady. That they have not done so is a matter of notoriety—hence the disorder cannot have been a travelling intruder, but a spontaneous formation of the soil and atmosphere on which, and in which, it appeared, and could *not be contagious*. They will tell you that there are different degrees of contagion—but that you must not believe; for depend upon it, experience has taught no such thing, and the soundest principles of medicine reject such a doctrine. A disorder is, or is not contagious. If it be so, it shows itself by attacking the greatest number of those who come in contact with the patients, or the different articles that have been in direct communication with them. If it does neither, then the disorder is not catching—and that is precisely the case with cholera. Even the strictest contagionists in regard to cholera have now abandoned the doctrine of the Board of Health, with regard to merchandise, letters, goods, &c. it hav-

ing been declared at Vienna, Moscow, Berlin, and St. Petersburg, that cholera is not communicable by goods, merchandise, &c. after they had made the strictest investigation on that point. And with respect to the communicability of that disease by contact between man and man like the plague, the facts produced by four-fifths of the medical men and civil authorities who have witnessed the present cholera, fully demonstrate and prove that it exists not. Even Drs. Barry and Russell, whose original reports serve to encourage the London Board of Health, in maintaining the notion of contagion, have very candidly and manfully declared in their latest communications that “The *epidemic* of St. Petersburg, did not possess those absolute and indiscriminate communicable qualities (which are) attached to plague.”

Q. By-the-by, I see in this report of Drs. Barry and Russell, a beautiful illustration of your explanation of epidemic disorders, particularly of those which become occasionally *infectious* under the circumstances

as mentioned in your publication of 1819; for they say, that "*the risk of infection incurred in the epidemic cholera of St. Petersburg by healthy persons, susceptible, (not by all,) who approached the sick of that disease, was in direct proportion to the want of ventilation, and cleanliness, and space around the latter.*"

A. This is certainly gratifying to me. However, I am not bound to adopt the Doctors' conclusion with regard to cholera—for after what Mr. Searle and Dr. Lefevre of St. Petersburg, have stated on their own responsibility and experience in the epidemic cholera—the latter of which has been vastly more considerable than that of Drs. Barry or Russell—I cannot look upon cholera as *infectious*, in the sense of a presumed modification of contagion which those physicians apply to that word.

Q. Could you illustrate still further, by facts taken out of the history of the most recent epidemics of cholera, the improbability of its being contagious.

A. Nothing so easy. But in a work of

this description, necessarily brief, any great display of learning is not to be expected. I shall therefore confine myself to two observations, and leave the contagionists to explain the circumstances according to their own tenets as they best may. A citizen arrived at St. Petersburg in a boat from Wyterga, on the 28th of May, perfectly well. On the 14th of June he was attacked with symptoms of cholera. This was the first case of the kind that had occurred this year in the imperial city. On the same day a worthy painter fell ill in a different part of the town, and died in fifteen hours. On the 16th of June the disease showed itself in a policeman of the same part of the town, in an oilman in the quarter called Liteinai, in a waiter at an hotel in the quarter of the admiralty, and in a man in the artillery hospital, none of whom had had the slightest communication with one another. On the 17th of June eleven had been attacked, six of whom died. On the 18th two more fell ill, one of whom died. On the 20th of June there were already eighty-one patients at

noon, and from that hour till midnight, sixty-two more fell ill, all living in different parts of the town. On this same day forty died. On the 21st there were 132 patients, to whom, in the course of the day, ninety-two more were added. On the 22d the patients were 200, and 162 were the new cases. On the 23d, the patients 348, and the new cases 157. On the 24th, the patients 479, and, in the course of twenty-four hours, 141 new cases were added. On the 25th at midnight, the patients were 615, to whom 137 new cases were added in the course of a few hours after, and so on. So that, in the space of a few days, an insulated case of cholera had been multiplied into 1230 cases, scattered in every possible part of the capital, whether in hospitals or in private houses; and 558 of those patients succumbed to the disease.\* Now I would ask of Drs. Barry and Russell; I would ask of the Board of Health, in London, where is the train of gunpowder, which being laid

\* See "Journal de St. Petersbourg," Official Documents.

at the door of the insulated case of the merchant in one part of the town, carried this destructive flame on the same day, first to the painter resident in another part of St. Petersburg, and on every successive day to a hundred more patients, living in different and distant quarters, until it had overtaken, with unerring course, 1200 inhabitants, and destroyed nearly the half of that number? Where are the links of this mighty and fearful chain? What has connected the Alpha to the Omega of this dreadful alphabet of names through its intermediate letters? Did the patients themselves, as soon as they were stricken with the disorder, leap out of their dwellings, and by touching the unsuspecting passengers, or by shaking their garments over them, as they progressed through the well-ventilated, wide, and cleanly streets of the imperial residence, inflict upon the healthy the terrible malady by which they were tormented? Or did the charitable philanthropist, or the physician, or the victualler, carry the disease, (themselves un-

hurt!) to every corner of the city? But the very idea is absurd; the physical time would be wanting even for the execution of such absurdities. Well may Dr. Lefevre, a very able physician practising in St. Petersburg, who has just published a work on cholera, as it appeared in that capital, observe, “When upon inquiry it was found that within the space of three days the disease broke out in a dozen parts of the town, widely separated from each other, the supporters of contagion awaited further evidence, and the *anti-contagionists increased with the increase of the disease.*” The same train of reasoning, founded on similar facts, connected with the appearance of the disease in Berlin and Vienna, will suggest itself on perusing the history and official reports of their respective epidemics, during the last six months. But at Berlin, the singular precision with which its progress has been statistically watched, and made the subject of calculation, has left no room for the admission of the doctrine of the alarmists and contagionists, and proves the epidemic nature of the disorder.

Q. Do you happen to have by you the summary of those calculations?

A. I have. It appears that in September last, 893 persons were attacked by the severe form of cholera well known in Europe. Of these 768 remained in their own habitations, and 125 were sent to the hospitals. The number of houses in which the disease appeared amounted to 409 in 273, of which *one* individual only was attacked, while in the remaining 136 houses, 620 were attacked, giving a rate of between four and five individuals attacked in each house. On the other hand we are told, that from the most accurate enumeration, it appeared that the 409 houses in which the 893 cases of disease appeared during that month, were inhabited by 4200 families, which gave a population of 16,800 persons, assuming that each family was composed of four individuals. This large number of individuals, then, was brought into direct communication with the disease; and yet, notwithstanding a circumstance so singularly favourable to the development and progress of contagion, scarce-

ly more than one person in eighteen was affected by the disease. But then the contagionists will tell you that the one person is the rule, and the seventeen who escaped, the exception, because they were insusceptible?

Q. You can probably pursue this argument still further, or add some other fact in illustration of it?

A. Nothing so easy. The difficulty is where to stop with the facts, or how to make a selection out of such a vast mass of them. And it is worthy of remark, that all those facts which the anti-contagionists in cholera bring forward to support their opinion are connected with large masses of evidence, and not on insulated and single occurrences, to which most of the argumentative facts of the choleric contagionists refer. Here is another example, you are aware that Hungary was afflicted with cholera most extensively during the last summer. The journals of that portion of the Austrian dominions of the 20th of last month, (October,) state that according to official reports made

to the government, in the space of four months cholera had appeared in 2962 different places, attacking 333,711 individuals, of whom 151,020 had recovered, 151,734 had died, and 32,957 were still alive when the reports were made up. In the course of the same period of time the disease had entirely ceased, within an average space of eight weeks, in 1001 places, and had appeared in 125 other places. Is this to be explained by the contagionists? If coercive measures and restraint were used by the authorities of the country to prevent the spreading of the supposed contagion, when it first appeared in a few places, how came it to show itself in nearly three thousand places besides? and if the contagionists contend that the sanitary and restrictive regulations were badly enforced, wherefore has the disease stopped short of three thousand places, and not gone on unchecked to all intermediate and other villages, towns, and hamlets of that vast kingdom? Why, I would again ask, did it cease within a short space of time in one thousand places, long

before the hundredth part of their population had been destroyed by contagion, unchecked by the efficient measure of precaution? Do not these circumstances, together with the singular coincidence of the disorder having shown itself almost simultaneously in the majority of the three thousand places, tend to show that the disease is of a terrestro-aerial origin, and demonstrate the inexplicability and improbability of an opposite doctrine, or that which would convey the disease from place to place by means of a specific poison conveyed by men and goods?

Q. It has always struck me as very remarkable that this disorder, if it be the offspring of contagion, and not of some other phenomenon which prevails its destined time and then dies away, should stop at all in its course as long as there are victims in the places in which it was introduced. So far from this, however, being the case, we find that only a very small majority of the population has ever been affected. Is it not so?

A. Doubtless it is. There is a curious table, published by authority at Berlin, which exhibits this very point in its true colour. The table in question shows the relative proportion of persons attacked by cholera in the principal places in which the disorder has prevailed, and the calculation extends to fifty-two days, the average period of the duration of the disease from its first appearance. That proportion stands thus:— Out of every thousand inhabitants there were affected by the disease at

Lemberg	53½	Konigsberg	12
Mittau	35	Elbing	10
Riga	31	Dantzig	9
Posen	17	Stetting	5½
St. Petersburg	13	Berlin	4¼

Q. Why this being the case, the proportion of those who took the supposed contagion to which the whole town was equally exposed, bore a very insignificant proportion to those who escaped unhurt?

A. Truly so. And when you inquire of

those who insist upon that the cholera is contagious and communicated by man to man, to explain this singular fact, they tell you that it can easily be explained by supposing that those who escaped were not susceptible of catching it. So that at St. Petersburg, for instance, where only one-eightieth part of the whole population was affected by cholera, seventy-nine eightieths of it must have been insusceptible of the disease according to the choleric contagionists; who in this case again would have us believe, that by far the largest number of events form the exception, and the very smallest number the general rule.

Q. And yet from the rapidity with which this disease extends to individuals in the first week or two of its appearance, which, (in the case of St. Petersburg, as stated by yourself on the faith of official documents,) was such that the first case was multiplied into 1200 in the course of a fortnight—it would be more consonant with the doctrine of probabilities, as well as of true contagion, if a disorder so communi-

cated amidst the breathing population of a large town, should affect the larger majority of them and not the smallest minority. Do you not agree with me on that point?

A. Impossible to deny it. In fact there are two great general laws, which have invariably been observed in this epidemic disorder of severe cholera, and which the contagionists cannot get over, much less explain by their doctrine. The one is the simultaneous appearance of the disorder in a hundred different parts of the same town, and among several hundred individuals, and that in the course of a few days only—the other, its uniform cessation after a few weeks duration, and when only a small fraction of the population has been affected by it. If the latter does not of itself disprove the contagiousness of the disorder, it at all events affords the consolation of knowing that only a very insignificant proportion of us in London can become affected with cholera. How different are the laws of invasion and cessation in truly contagious diseases, communicable from man

to man by goods, and how much more formidable their results! Let us take the nearest example of plague being imported in a part of the British dominions, I mean Malta, in illustration of the assertion; and it will be found that the disease, which began in two individuals arrived from Egypt, who died on the 7th of April, 1813, did not produce a second case until nine days after, from intercourse with the two first. Two more cases were added next, but not until the expiration of seventeen days more, being the 3d and 4th of May. On the 5th of that month the nature of the disease was publicly proclaimed by the government, and from that time until the 19th, the progress of the disease was so slow, that doubts were entertained whether it was really the plague which had been introduced. Still it was proceeding, and proceeding insidiously, through the widening communication of relatives and attendants, until it at last reached that degree of intensity, which caused the destruction of the twentieth part of the whole population of the island in the

space, not of six or eight weeks, or of two or three months, but of seven months; nor would it have ceased, except for want of victims, had it not been for the most vigorous and coercive measures of Sir Thomas Maitland, such as never fail of success when employed in checking truly contagious disorders.

Q. Verily, one must be a blind worshipper of preconceived opinions to believe in the contagious nature of cholera, after such striking facts, which show a totally different mode of propagation in that disorder. Have not all these facts made an impression on the contagionists and the Board of Health?

A. Virtually they have; for in addition to such facts, and many hundred more, there have been several very deliberate declarations of the Austrian, Prussian, and Russian governments, respecting the non-transmissibility of the disease by goods and merchandise, and the inutility of coercive sanitary laws, which have staggered our Board and their supporters. But they seem unwilling to make a candid and full confes-

sion of their error; and they have only within the last few days given up fumigation and the quarantine upon goods. They must, however, sooner or later, admit the whole truth and declare it; and, as I observed on a recent occasion, in addressing a large public meeting of medical gentlemen, "the cholera-contagionists have wonderfully leaped from their assertions—they have nearly met their opponents half-way this evening—and by the time of our next meeting, (Saturday next,) they will altogether surrender their erroneous notions, and admit, that we who consider cholera—mild or severe in its form, no matter—to be nothing but an epidemic disorder, of home growth, and not communicable from man to man, are right."\*

\* A few days after this part of my statement was sent to the press, and five days after the statement was made by myself in public, I had the satisfaction of seeing my prophecy verified. The old Board of Health, to whose declarations and erroneous opinions the present panic is due, has been dismissed, and a new *Central* Board of Health established instead. These gentlemen seem to enter on the execution of their duties with sounder notions, and among the recorded

Q. Your view of the whole question is infinitely more consoling than that which had hitherto been taken by the would-be leaders of public opinion on the present occasion, and must, so far, be of service, as it will tend to restore that courage to the inhabitants of these realms which you state to be essential in our endeavours to resist the influence of epidemic diseases. But may it not lead, also, to a relaxation of that vigilance and attention to cleanliness and temperance on the part of the industrious classes of the community, which are equally necessary to

proceedings of their first meeting, it is delightful to find them speaking out thus: "It is with much satisfaction that the Board feel themselves authorized to declare, and it will no doubt be highly consolatory to the public to learn, that under proper observances of cleanliness and ventilations, this disease seldom spreads in families, and *rarely passes to those about the sick,*" &c. &c. And in another place, the new Board goes on strongly to deprecate all the measures of coercion for separating the sick from the healthy, which the old Board and the *Quarterly Review* had as strongly inculcated.—(See *Times*, 17 Nov. 1831.)

preserve them from the effects of the disease?

A. You will shortly see that such cannot be the result of a consoling view taken of a prevailing epidemic, which has the great merit of being true, and of coming home to the understanding of every one; because, in adopting that view we must also adopt the precepts and directions by which it is accompanied, and which will form the subject of the next and concluding sections. On the other hand, consider the baneful effects produced by the erroneous notions of the advocates of contagion, and the regulations which they have issued in consequence, together with their appalling picture of the character of a malady which they have armed, (instead of disarming it,) with additional mischief and increased terror. Good God! is it come to this, that we are to desert our relatives and friends, leaving them in charge of some aged, feeble, or drunken hireling, to save ourselves from a supposed contamination! And even by such an act of selfishness

and disregard of the dearest ties, how can the propagation of the disease be impeded, supposing it to be contagious? Are there not the inspectors, the servants, the medical attendants, the nurses, the victuallers, the people employed in carrying and burying the dead, who can all become in their turn contaminated, and consequently contaminators in their intercourse with their own families? The whole thing is unworthy of minds, otherwise highly educated, and eminently qualified as physicians to treat diseases with which they are well acquainted, and which tend not to warp their judgment by the terror they inspire.

## THIRD SECTION.

## THE NATURE OF CHOLERA, ITS CURE AND PREVENTION.

Q. As your professed object in the present part of your work is to offer to the public a plain and popular statement of what is considered important, and no more, respecting cholera—you will not, I suppose, enter into any minute details of the many medical theories by which the nature of the disease has been attempted to be explained?

A. I certainly have no such intention. Were I addressing myself to the medical profession, I should think it my duty to speak more at large and scientifically on the nature of cholera, its remote and its immediate causes, its permanent and its erratic or anomalous symptoms, and lastly of its treatment. But I write for the multitude, and they stand in need only of plain facts and plain directions.

Q. You have already given a general and

rapid sketch of the severer form of cholera —quite sufficient, no doubt, for the purpose of putting people on their guard, without exciting fear. Should you feel disposed to favour us with a more detailed and specific account and description of that malady?

A. I think it more prudent to decline doing so; for, (as I before observed,) writing as I do for the many, who, if attacked by the first symptoms of the disease, would have a sufficient warning to induce them either to adopt the easy measures recommended for their immediate relief, or to send for a medical attendant; any further account of the subsequent and more distressing signs of this painful disorder would but disturb their mind while labouring under it without affording them better means, in their hapless condition, of benefit by such heart-rending recollections. Of what use, think you, has been the long, minute, and highly-coloured description of the origin, progress and fatal termination of cholera, published in a cheap form by the old Board of Health, and put into the hands of every

class of persons in the community, but to excite alarm now, and prepare future recollections and dreams of terror during the disease, for the unfortunate individuals who are destined to be attacked by it!

Q. Most truly observed. The terror excited by the defunct Board could only have been equalled by that which the inhabitants of London must have felt during the ravages of the plague, or the universal conflagration of their city. I have witnessed the keen distress occasioned by the account of the disorder given by that Board, among several families; and I conclude that such a condition of the mind would, sooner or later, dispose us to become affected by *any* disease.

A. Dr. Lefevre states in his work, that "of all causes which predisposed to the disease, (cholera,) moral affections were found the most frequent, and their baneful effects were not merely contrived to render their victims more susceptible of the malady, but they produced a decidedly fatal influence on the constitution itself. That many died of fright was a phrase re-echoed by every me-

dical man in the city, (St. Petersburg,) and fear may, consequently, be considered as the chief predisposing cause." If such be the opinion of the experienced, what have not the members of the late Board and the writer of the Quarterly Review to answer for, when they scunned the tocsin of alarm, branded the poor patient with the black mark of contamination, condemned him to be dragged out of the dwelling of his father in order to be consigned to a lazaretto, threatened to employ coercive measures to enforce the separation of the sick from the healthy members of a family, and subjected every house in the country to domiciliary visits by strangers, under the pretext of inquiry into the existence or non-existence of a disease, in order forthwith to proceed to violent measures *for the safety of the State!*

Q. According to your view of the case, therefore, you would rather acquaint me with so much of the character of the disease as will enable us, who are unskilled in physic, to understand when we are stricken with the disease, what to do at the very on-

set, leaving all that is to follow to the care of a medical attendant? This is the more necessary, as I suppose that very little doubt exists but that cholera, which in its severer form has shown itself in Sunderland, will go on augmenting, and spring up, likewise, in many other places, including the metropolis?

A. Just so. Nothing but the most unlooked for circumstances can now prevent the appearance of this epidemic disorder among us. It is even now forming in England, and will show itself with more or less severity than it has done in Berlin or at St. Petersburg. It will go through its more usual course of eight or ten weeks' duration, and subside quietly, long after the public in general shall have ceased to feel any interest in its progress?

Q. To which of the symptoms would you wish to direct my attention?

A. The symptoms of severe and dangerous cholera concern, 1st. the head, 2d. the stomach and bowels, 3d. the muscles in general, 4th. the heart and arteries, 5th. the

chest. To the three first series of symptoms, then, would I wish to direct your attention, because they are, in reality, the distinguishing symptoms of this particular disorder. The two last series of symptoms, namely, those which concern the heart and arteries and the chest, may, or may not, be present in the disease. At all events, they are symptoms which may, and do often, accompany other diseases, whereas the three first series belong only to cholera.

Q. What are the symptoms which concern the head?

A. Giddiness, or a sudden sharp pain of momentary duration, dizziness before the eyes, or dimness of vision, noise and singing in the ear. One, two, or more of these symptoms, are present and mark the outset of the attack. The last mentioned symptom never fails in cases of severe cholera.

Q. Which symptoms are referrible to the stomach and bowels?

A. Nausea, followed by vomiting, with a sensation resembling that of sea-sickness, great heat at the pit of the stomach, intense

thirst, heartburn, and purging. The matter ejected, when not altered by the mixture of food or medicine, is of a greenish cast, sometimes of a dirty white, like water-gruel, slimy, or mucous; at other times it has the appearance of coffee grounds; and in few cases, it is pure bile which is vomited, as in the case of the more common species of cholera.

Q. The third series of symptoms is that which has reference to the muscles in general: will you describe them?

A. Readily. A tremulous motion of one or two fingers, or of the fleshy part between the thumb and forefinger, and twitching of the muscles of the chest, have given warning of an attack which, when begun, was accompanied by severe cramps, beginning in the fingers and toes, and extending to the arms and the lower part of the chest, as well as to the calves of the legs, thighs, and belly. After a little duration of the cramp, pain comes on with increased oppression and constriction about the stomach.

Q. There are several other symptoms

which remain to be described, such, for instance, as concern the state of the pulse, the beating of the heart, the nature of respiration, the quality and quantity of the secretion from the kidneys, and the condition and colour of the skin, the degree of depression and exhaustion that may or may not exist, with many others mentioned by authors which have treated of this disease, but which, I presume, you will not descant upon, because they are, properly speaking, the province of the physician, for whose guidance you write not?

A. Just so. Those are the symptoms that mark an attack of cholera in its incipient state, which I have described. They are quite sufficient to put the patient on his guard to proceed, of his own accord, or by the assistance of friends, to do that which will afford him ease and the chance of cure to be presently described: as for the rest, he should not trouble his head about it, but forthwith send for his medical adviser, or any other near at hand.

Q. Have you formed an idea, from the

contemplation of these symptoms, and of those still more important, (in a medical point of view,) which you left untold, as to the nature of the disease, I mean as to what it consists in, or what are its immediate causes?

A. I have. Cholera consists in an affection of the nerves, so violent as to disturb all those parts and functions with which the influence of nerves is the superintending agent. This affection of the nerves being of a spasmodic, (crampy,) kind, *contraction* is the necessary consequence of it. Thus we have first; among the symptoms affecting the head, sharp pain, of momentary duration, resembling that of *tic*, producing *tightness* in the head; and the noise and singing in the ears seem also the effect of convulsive contractions of the passage of sound. Secondly, among the symptoms of the stomach and bowels, we find pain, *constrictions* and convulsive contraction of the stomach and bowels, producing vomiting and purging. The same contraction shuts up the channels of the bile and those of the kidneys. Thirdly, among the symptoms which are referrible to

the muscles, the same phenomenon of contraction is strongly marked, producing acute pain. This application of my view of cholera might be extended to the remaining symptoms with equal justice, and would be found to tally with them with striking accuracy.

Q. What functions or operations performed by the parts which you have demonstrated to be nervously and spasmodically affected, and afterwards *contracted*, are disturbed in cholera?

A. First, *the circulation of the blood*, in consequence of the spasmody and alternate *contractions* of the heart and arteries; hence their motion is found nearly to cease during an attack of severe cholera, and the pulse becomes altogether impereceptible at the wrists as well as in the temples. Secondly, the *secretion or formation* of the different fluids in the body, in consequence of the contraction of the channels and vessels by which those operations are performed. Thirdly, the *digestion of food*, in consequence of the spasmody contraction of the stomach and bowels.

Q. And what may be the mighty and PRIMARY cause which can give rise to such wonderful and fearful effects, *through the agency of the nervous system morbidly affected?*

A. A peculiar state, condition, and modification of the atmosphere we live in; a congeries of meteorological phenomena referrible to the air and to the soil we dwell upon; in fact, a blight, a poison, an obnoxious something which is formed round about us —how, we know not—and which, moving with the atmosphere and spreading itself to different extents within it, shows its hostility to the human constitution whenever this is exposed to its direct and continued influence. A respectable officer, high in rank, who served in India, assured me that, while marching with his regiment in a particular direction, it had often happened to him to be told that the soldiers at the head of his column had been attacked with cholera: upon which he invariably altered the line of march, sending some to the right and some to the left of the road they formerly occupied; and the disease no longer appeared

among the soldiers. Mr. Pettigrew, in his pamphlet on cholera, has instanced a skilful manœuvre of the Marquis of Hastings while in India, by which he put an end to the devastation produced by cholera among his troops, and which consisted in moving the troops fifty miles only from the spot they occupied, to another where the soil was *dry* and *elevated*.

Q. What think you is the immediate effect of this poisonous influence of the atmosphere upon our constitutions?

A. Excessive proneness to indigestion, with the formation of an acid of the most pungent and deleterious nature, probably nearly allied to muriatic acid, giving rise to the affection of the nerves I have before mentioned.

Q. You mean to say, that while the physical causes you have alluded to shall continue to prevail, our stomachs will be considerably more liable to be disturbed in their functions, and to generate a particular strong acid, which you imagine to be something like muriatic acid?

A. Exactly so.

Q. Have you any positive proofs of such being the fact?

A. None but inferential. Unfortunately chemistry has not yet lent its aid to this inquiry; but we infer that acid is present in the stomach, in this complaint, from the observations of the patients when they have vomited, and we draw the same inference from the universally admitted fact, that when alkalies, such as magnesia, bismuth, sal volatile, and ammonia, have been given, they have produced the greatest share of relief in this disorder. And, lastly, we infer that a peculiarly pungent acid is present in the stomach, because the severe symptoms which I have enumerated, as arising from a specific affection of the nerves in this malady, are such as we find in cases where strong acids have been taken into the stomach in too large a dose, producing cramps, vomiting, purging, heat, and pain at the pit of the stomach, exactly as they occur in cholera.

Q. Would this view explain also the coagulation of the blood observed in the heart

and large vessels, and the strong marks of inflammation observed after death inside the stomach and bowels?

A. Unquestionably it would.

Q. Now, setting aside altogether this view of the disease, what is the treatment which your reading and experience have suggested to you, as the most effectual and likely to be successful?

A. I shall limit my answer to that question, to the suggestion of such measures as may and ought to be quickly adopted by the patient himself or his friends before a medical man can be procured. To do more, in a work of this kind, would lead to error. I premise my suggestion by stating that I place not the slightest faith in your Cajeput oil, camphor, oil of peppermint, or cinnamon—your pure stimulants, and all the cholera drugs which the late Board of Health have suddenly raised into notoriety by their recommendation, and through notoriety into a high price, which has proved the means of making the fortunes of some score of druggists. That which I recommend is simple, cheap, and I trust will be

found intelligible as well as easy of execution. On its being ascertained, from the symptoms detailed in this work, that an individual has been attacked by cholera, let a wine-glassful of hot water, with twenty of the "stimulating alkaline drops" of which I have left the prescription with a highly respectable chemist in London,\* and thirty drops of laudanum; be given. This is to be repeated every twenty minutes, until some relief or the cessation of vomiting takes place. In the intervals, if great thirst exist, and prostration of strength, with very cold skin and clamminess, large draughts of water, as warm as can be swallowed, with one-fifth part of brandy, should be drunk. This will be found to quench thirst sooner than cold water, and will assist materially in producing a warm perspiration. But as the latter is the next important object to be obtained, and should be secured to the patient without any loss of time, reliance must not be placed alone on the hot brandy and water drunk, nor on the "stimulating

\* Mr. Garden of Oxford-street.

alkaline drops" taken along with it; although they are also a powerful sudorific, at the same time that they safely stimulate the system, and neutralize any acid, present in the stomach, with a rapidity scarcely to be believed by those who have not witnessed its effects. Other means must therefore be adopted to produce perspiration at all events, and that quickly too; and as in the choice of these we are much limited by the necessity of keeping the patient quiet in the horizontal position, our endeavours should be directed to the application of heat with a little moisture to the body. For this purpose I recommend a couple of bushels of bran, boiled rapidly in very little water in a copper or large saucepan or earthen vessel over a brisk fire, drained through a flannel, and very thickly scattered all over the chest and belly of the patient, sides and all. This is to be retained in its place by bringing the two sides of a blanket, on which I suppose the patient to be lying, over the belly, and fastening them tight in that position. This process will produce, in a very few minutes, the most copious

and warm perspiration. The refuse grains of malt or oats, similarly boiled, will answer the same purpose where bran is not at hand. I have no faith in the portable vapour-baths, the steam of water thrown up under the bed-clothes, or the lighting of a spirit-lamp, placed similarly, which have been recommended. I have often and long ago tried all these means in cases of puerperal fever and acute rheumatism, and in one remarkable instance of the latter disease, in my own case, but found them totally inadequate to the object in view, and many of them quite inefficient. Let not the public, therefore, be misled on this point. As for sand-bags and bags of salt, as mentioned in the circular of the former Board, they are perfectly inactive, besides being troublesome, because of the great number that is required of them and the time lost in preparing them.

Q. It is well you mention these facts, else some severe disappointments might ensue when the disorder is amongst us. Happily, your mode of fomenting and producing perspiration is much handier than any vapour

baths, and must be more comfortable to the patient. Is there any other step which ought to be taken at this important conjuncture?

A. Yes. While the warm applications are proceeding and the internal medicines given, a degree of revulsion should be produced by rapidly promoted counter-irritation on the skin. This will be found to give impetus to the circulation, and thereby to ease the tumult existing in the centre of the body. The counter-irritation should be applied to the thighs and to the upper part, not to the soles, as recommended, of the feet. There are a great many counter-irritants, or agents, which produce irritation on the surface of the body, that have been recommended in this disease, (for the principle is generally adopted by all of us;) but some are objectionable, and most of them are too slow in their operation; and here we have no time to lose. A common blister is too slow; a mustard poultice, besides being slow, is inefficient. Tartarized antimony ointment is out of the question. Nitric acid, and even a liniment with vitriolic acid, have been recommended and employed: but these char-

the skin, and form eschars, which are, so far, a check, rather than an encouragement, to rapid counter-irritation. Some practitioners, fully aware of the great importance of raising a blister on the surface of the body quickly, have actually poured boiling water on the belly in the treatment of cholera; but this is a cruel method, and liable to much consequent mischief; as to camphor and turpentine liniments, we might as well amuse ourselves in blowing cold air on the limbs of the patient. The effect to be produced must be rapid, permanent, available, and general in its influence on the constitution. I have been fortunate enough to devise an emulsion or lotion, consisting of three stimulating ingredients, of which I have now had an experience of three years, and which answers to all the above requisites; for besides relieving muscular and nervous pain in five minutes, it will produce an active degree of inflammation of the skin in half that time, and a blister, fit to be pierced and dressed in the usual manner after the evacuation of the fluid, in little more than eight or ten minutes. This lotion, then, is to be ap-

plied by means of compresses of linen, or two or three folds of old flannel, to the inside of the thighs and the upper part of the feet, retaining the said compresses in their places by means of a dry towel pressed down firmly by the hand during the whole time of their application, when the desired effect will certainly be produced. If, after reaction has begun in the system, pain or tenderness exist in the abdomen, an application of the same lotion to produce either simple counter-irritation, or a blister will forward the recovery. The same lotion will be found additionally beneficial should the patient be in a state of great languor, heaviness, and stupor; which are symptoms often occurring in the first attack of cholera; for, by its almost painful impression on the parts to which it is applied, the system is roused to a wonderful degree of action. I have seen a child two years old which had been labouring under pressure in the head in a case of brain fever for two days, roused and benefited in less than a few minutes by the application of this lotion to the nape of the neck, where in that short period it caused a

blister, which healed most kindly—as such blisters do on all occasions.

Q. Do you not recommend bleeding in the early stages?

A. I do; but the point is one of nice discrimination. If, while the measures which I have proposed are in progress, the pulse becomes perceptible and gradually fuller; if the hot bran has succeeded in bringing on an excited state of the skin and a warm perspiration, showing that an improved state of the circulation has taken place; if the counter irritation on the limbs has been successfully applied, and local inflammation established as a revulsive against the inward disorder; if, in one word, there has been what is called a *reaction* in the system—then I would use the lancet to secure the recovery. Besides the more ordinary modes of taking blood from the patient labouring under the cholera, in which the large blood-vessels of the abdomen are distended with half congealed or treacle-like blood, I recommend the trial of leeches to the hemorrhoidal vessels in pretty large numbers, and bleeding from some of the larger veins in the lower

or middle part of the thighs. But this point as well as the propriety and choice of the purgative medicines to be given when the vomiting and the spasms have greatly diminished, and lastly all other means that may be required in the progress of the disease, I must leave to the medical attendant to determine. My task, in a work of this kind, ends where that of the medical man begins. It was my object to enable people to help themselves, while those who are afterwards to help them are sent for, and to tell them in plain language and by means easily attainable, how to profit of the time which must elapse before any assistance can be procured; a time, alas! too precious to be lost—as it frequently happens in the epidemic cholera that the loss of the first hour or two, without doing any thing, has been fatal to the patient. Bran—laudanum—brandy—a bottle of the alkaline drops, and another of the counter-irritating lotion, are not cumbersome nor difficult to be procured, and may be supposed to be constantly ready at hand on such an eventful occasion.

## FOURTH SECTION.

### PREVENTION AND PRECAUTIONS.

Q. How should we live in order to preserve ourselves from cholera, and by what means can we hope to escape its attack?

A. My reply will embrace two series of suggestions calculated to promote the objects embraced by your question. The first will be applicable to each particular individual, and point out the conduct he ought to pursue, in order to preserve himself from an attack of the disease. The second will refer to the community at large, and detail such measures as are best adapted to check the disorder when once it has made its appearance amongst us.

Q. What are the suggestions which you consider as applicable to individuals?

A. They are such as relate to their diet, their clothing, their general and particular mode of living, their passions, and the use of preventive medicines.

Q. Detail those which relate to the diet?

A. It has been unanimously stated by all the medical practitioners who have seen the severe form of cholera, that irregularity of living, that imprudence in diet, and excesses of the table, as well as deficient, neglected, or low diet, disposed people to be attacked by the prevailing disease. It is notorious that imprudence in diet is capable of producing, under common circumstances, any ordinary bowel-complaint, and that the same cause has given rise to the more common form of cholera in the summer, or at the close of the autumn, in most countries in Europe; it is therefore reasonable to suppose, that an attack of the more aggravated form of cholera, will be greatly facilitated by the same cause. For example: it was observed in India that the natives who mostly live on a vegetable and spare diet, were sooner attacked by the epidemic, and died in greater numbers. Dr. Lefevre has made the same remark with regard to the lower classes of Russians, whose fare is at all times hard, and much less nutritious than that of English peasants. On the other hand,

it has been remarked, at Moscow and at Riga, that any great feast or holiday which brought the lower orders together, to indulge in the common vice of guzzling and intoxication, was invariably followed by a marked increase in the lists of patients the ensuing day. After the celebration of the church festival of Pentecost, at Riga, in June last, the number of those who were attacked by cholera the following day, was 148, although the daily number of patients had just before got as low as fifty-five only.

Q. Am I to understand, therefore, that the best diet in such a conjuncture is one which shall be neither too low, nor too generous?

A. Precisely so; bearing in mind that one of the best preservatives against the disease, has been found to be a dry, concentrated, and invigorating diet. Among the English inhabitants of all classes at St. Petersburg, of whom there are more than 2000, only thirteen died during the prevalence of the disease—a circumstance which must, in a great measure, be attributed to their better mode of living.

Q. Be pleased to specify a little further

the different points of this part of your suggestions?

A. During the prevalence of cholera, or while the disease is expected to show itself amongst us, never leave home in the morning with an empty stomach. Mr. Searle, who lived unscarred by the disease in the very heart of its scene of desolation in Poland, took a cup of coffee with or without a tea-spoonful of brandy in it, and a biscuit when he sallied forth too early for breakfast. He also recommended a light supper to those who dined early, with a little of very diluted brandy, and early retiring to bed. The breakfast and dinner should consist of nutritious food eaten in moderate quantities. All slops as well as superfluities should be avoided. Undressed vegetables, unripe fruit, and at this particular season I should add, all sorts of fruit, especially pears and apples, cold liquids, such as soda water, weak malt liquors, public-house porter, Rhenish and light French wines, are likely to be very pernicious. The best beverage for dinner is a tumbler of very warm

water with two glasses of the best and oldest sherry wine, sweetened with a little sugar, and made aromatic by the infusion of two or three cloves in it. In fact, we should attend with strict precision to the rules I have laid down in the body of the present work, respecting diet, with the exception of a somewhat more liberal allowance of wine, than therein mentioned, and the admission of very diluted warm brandy.

Q. What directions can you give as to clothing?

A. The first is to wear a large piece of flannel next to the skin, over the belly, by day; not because there is any specific virtue in this measure, but because that part of the body more especially should be kept warm. More bowel-complaints occur, in my opinion, in this country from cold affecting the belly, than people seem aware of. A wash-leather waistcoat with sleeves over the shirt, and such other clothing as will keep the body comfortably warm are recommended. Woollen socks should be worn on the feet, and when these, by any chance,

get wet in walking, they should be stripped of their coverings immediately, and rubbed by the fire. This is a most important point. The sum total of our clothes out of doors should be so arranged, that we may be able to throw off, in cold weather, a good portion of them when in doors. At night never go out without having something additional round the neck—and in bed be careful to have your feet rather too warm than at all cold. Recollect that the attack generally comes on at night. If the surface of the stomach feels cold to the touch when you get into bed, or wake in the night, apply hot cloths or flannels to it immediately. Attend to the cleanliness of every part of the body with more than usual care, and in so doing use nothing but warm water. Change your body linen and that of your bed as often as your circumstances will permit.

Q. The next subject for your suggestions, you said, is the general and particular mode of living: have you any especial observation to make upon it?

A. I have; and though they may at any other time appear frivolous, they are not to be disregarded on occasions of the prevalence of the epidemic disorder. I would say, therefore, that our mode of living, or regimen, as it is called by the learned, should be regular and methodical, even to monotony. By leaving no step of our daily life to be directed by chance; but, on the contrary, by directing every step methodically, we shall run no risk of finding ourselves, when we least expected it, in some dangerous scrape. Thus for example, if we have not made up our mind to retire to our homes early every night, after our respective occupations of the day have ceased, and of keeping to our apartments, uniformly warmed, until we go to bed; but, instead of this regularity, we leave it to chance, whether we are invited out to dinner-parties, or shall visit the theatres, how are we certain that with all our precaution, we may not be constrained into a situation of danger, either by the temptation of good things at a table—by being placed in a situation where the

wind blows upon us, and which we cannot alter—by getting wet because no vehicle is to be found, and sundry other chances of equal risk? Therefore, I repeat, in times of epidemic disorders, and particularly when such a disorder as cholera is threatening us, make your mind up to be systematical in all you do, and in the division of your hours and occupations. Rise early—devote an hour to personal cleanliness—take your breakfast and sally forth for a walk, or proceed to your morning occupation—eat an early dinner, at two or three o'clock—again take some exercise on foot—return for your evening meal early—and after having enjoyed the society of your family circle, or the luxury of reading and study, get into a comfortable bed, and court sleep. I observe many ladies, some without, but many more with children, going about town in open carriages, even as late as six and seven o'clock in the evening, at this season of the year. Let me tell those persons that they will rue such a practice by and by. It is pregnant with danger just now. Avoid

crowded rooms—keep clear of bad smells—save yourself from fatigue; if you are obliged to be for a time in low, dirty, and ill-ventilated places, keep a smelling-bottle under your nose containing some liquid chloride of lime. Occupy the upper floor of the house for your bed-room and let your bed be so situated, that it may be readily ventilated. Snug corners and alcoves are bad situations for your beds. In walking, riding, or standing still, take care to place yourself always to windward, or select such situations as are protected by buildings from the wind.

Q. Have you much to say on the subject of passions, as connected with our preservation from cholera?

A. Very little that I have not already mentioned in more than one part of this work. Fear, I have stated, has proved at all times, but more particularly during the prevalence of cholera, a fruitful predisposing cause of disease; be firm, therefore, and confident. Cheerfulness of disposition; equanimity and serenity of mind, are essential means of preservation from epidemic disor-

ders, cholera especially. You have now the consoling assurance of the New Board of Health, in confirmation of what we, the anti-contagionists, in regard to cholera, had long before declared and contended for, that the disease *does not pass to those about the sick*, and seldom spreads in families. Cholera, therefore, is thus disarmed of one of its worst terrors. You only run the average share of risk of one in 1,200,000 individual inhabitants of the metropolis, of being affected by the epidemic influence of the atmosphere, while that influence lasts; and as you are put in possession of several means to counteract that influence, the chances are greatly in your favour that you will not be attacked by cholera at all. To this conclusion I am authorized to come by my experience, which has been very considerable, and my observations, in more than one general epidemic,\* and by what I have

\* Monsieur Moreau de Jonnés, whose work on cholera has been much commended by the contagionists, and I think justly, as far as industry and erudition are concerned, but not in regard to his doctrine of con-

read in all the authors, (twenty or thirty of them,) who have treated of cholera. But this encouraging view of cholera will, in my humble opinion, be still more improved, and in the majority of cases made a matter of certainty, if we use a few of the medical means which I will venture to propose.

Q. What means are those?

A. The first refers to the state of the bowels. On this subject, I am sorry to differ from the present Board of Health, who, in every respect, deserve great credit for having issued a proper code of regulations in the present emergency. They state that moderately *costive* bowels are conducive to exemption from cholera. More so, I dare say, than relaxed bowels; but much less so than when the bowels produce poultaceous evacuations, which is the precise state they

tagion in that disease, did me the honour of stating in a Report read to the Institute of France, in August, 1825, that—"Dr. Granville, in my opinion, is one of the most skilful physicians in Europe in the knowledge of the phenomena of contagion—and in the means employed to combat it."

ought to be kept in by means of pills, consisting of small proportions of rhubarb, extract of jalap and bitter apple, mixed up with essential oil of caraway or cloves. Even moderately costive bowels require an effort, which fatigues the muscles of the abdomen, when occurring daily, and lastly, soreness of the lining of the abdomen, as those well know who have habitual *costive* bowels, and cannot bear pressure on the belly without some degree of pain. Ginger tea with magnesia, and some of the warm purgative tinctures will be proper substitutes for the pills, where the latter are not preferred. The stimulants, whether solid or liquid, and the tonics which have been offered to the public in the thousand advertisements that have inundated the daily papers since the recommendation of the defunct Board of Health, by recommending those drugs, gave a sort of sanction to such advertisements—are as many two-edged tools put into the hands of unskilful and ignorant workmen. I perfectly agree with the new Board, that *drugging* is to be deprecated at all times; and more so

when epidemic disease is apprehended: but, as I before stated in the sixteenth chapter of the first part of this work, if the prevailing disease be dependent on a disturbance of certain functions, which any particular preparation of drugs is calculated to preserve intact—the taking of such a preparation must be beneficial. Cholera, I firmly believe, owes much of the facility with which it makes its attack on individuals, to the presence of acid in the stomach, which is neutralized by alkalies, as most authors on cholera have reported, and all those German practitioners have admitted, who have administered magnesia, bismuth, and hartshorn in the disease with success. The moderate use, therefore, of alkaline medicines daily taken, must be of service, and I fully expect will rank among the best preservatives, by keeping the stomach, at night in particular, (the most general time for an attack of cholera,) free from the presence of such acids. The great point in choosing from among the alkaline medicines which we mean to use, is to select one which shall be easily taken, which may be taken

in a small compass, which shall be rapid in its effect of destroying the morbid agent in the stomach, and which shall impart tone to that organ and energy to the circulation—neither magnesia nor bismuth possess all these requisites, though excellent in themselves. Hartshorn or sal volatile, or carbonate of ammonia is preferable, but not, I think, sufficiently energetic, and permanent in the effect. These considerations have led me to think that the “alkaline drops,” which I mentioned in speaking of the treatment of cholera in another part of this work, would answer all the purposes above stated, and I was induced to think so by the extensive experience I have had respecting their use in cases of common indigestion and acidity of the stomach. Accordingly I lost no time in recommending all those, among my acquaintances who have asked me for instruction how to act in case the cholera should appear in England, (and what person has not put the same question to his medical attendant by this time?) to take, as a preservative from one of the most prolific causes of

cholera, acidity, and want of tone of the stomach, ten of the "stimulating alkaline drops" every night at bed-time, in a large wine-glassful of hot or cold water, and I have myself adopted the same plan. It is remarkable that several of these acquaintances who had before been habitually subject to indigestion and bile, and languid circulation have, in the course of a few days of taking the preservative drops, been materially relieved from the unpleasant symptoms which before afflicted them. If, on going to bed, I find that the dinner is not undergoing an easy digestion in the stomach, and I experience any uneasiness, or feel the slightest acidity, I increase the number of drops, from ten to fifteen.

Q. Would you now pass on to the consideration of the second series of suggestions for the preservation of health during the approach or prevalence of epidemic cholera, as they refer to the community at large, and detail all the necessary measures for that purpose?

A. This has already been done with so much promptitude and ability by the New

Central Board of Health, as well as by the city of London Board of Health, whose instructions have been widely circulated\* that I

\* There is one part of the regulations of the City of London Board of Health concerning the cleanliness of streets and houses, which cannot meet with the unqualified approbation of the profession, and could only have been framed under the supposition that we had to contend with a contagious disorder. Now that that absurd notion has been publicly abandoned by the magistrates of health in their recent recantation, I suppose the objectionable regulations will also be abandoned. I allude to the injunction given to the inhabitants and dwellers in small tenements, to wash their floors every day, and to the plan of converting every street by night into gurgling streams, by inundating them with water from the New River and the river Lea. Nothing could be proposed more impolitic or insalubrious. Dampness, which is the very nest of cholera, would thus, with the heat of fires in close rooms, and the natural process of evaporation in the streets, keep up at home and abroad a state of atmosphere the very reverse of that which it is the intention of the Board of Health to secure to the public—a healthy one. Let the streets be well swept every day or every other day, and the floors of close and small rooms kept dry, and holy-stoned, like the decks of a man-of-war, and thus kept clean without moisture.

must refer you to their respective circulars for information. You will, however, permit me to observe, that while I cannot but approve, in common with my brethren, those regulations which relate to cleanliness, ventilation, surveillance and relief to the poor, and the establishment of several Boards, with instructions to watch over and report, statistically, the progress of the epidemic; I most unequivocally dissent from some of their indistinct and contradictory notions. The expressions made use of in their circular by the Central Board of *suspected* sources and *infected* persons, seem to favour the doctrine of contagion upheld by their predecessors,\* but very manfully abandoned by the present Board. Objectionable also, except in the case of parochial paupers, are the regulations by virtue of which inspectors and sub-inspectors are authorized to penetrate into every private dwelling, and a member of a district board alone made to judge of the real character of

\* See the short Appendix at page 105.

the disease existing in a family. This would prove a cumbersome, time-losing and invidious process, unnecessary in this enlightened country where every medical man, when called in by those who habitually place confidence in him, must be perfectly capable, after all that has been written on the subject, to judge, of the nature of the disease, of the means to be immediately adopted for the safety of the patient, and the preservation of the rest of the family from an attack of the prevailing epidemic. All this and much more would be done privately without fuss, without the least loss of time, without alarming the patient or his friend, and without terrorising the neighbours, who would be shocked whenever they should happen to see an inspector a sub-inspector, or member of the board pay, each in his turn, a visit to some adjoining houses. The object being to tranquillize the public feeling, which has been most painfully excited—all regulations for the benefit of the public, should be divested, as much as possible, of every appear-

ance of formality, complication, and inquisition, particularly in this the most jealous country on earth with respect to individual rights and independence.

In conclusion, I would say unto you and unto my readers, await with firmness, but not foolhardiness, with resignation yet not with dejection of spirits, that visitation of **PROVIDENCE**, which, after having chastened the flesh of the dwellers in India, Persia, Russia, and Germany, is now about to add England to the number of the punished nations, and truly believe that "**WHAT IS, IS FOR THE BEST.**"

## APPENDIX.

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### UNDISPUTED LAWS WHICH GOVERN DISEASES IN GENERAL.

1st. Diseases, when reference is made to their origin and mode of propagation, may be divided into **SPORADIC\*** and **ENDEMIC†** or in other words into spontaneous, permanent, and transitory.

2d. If the particular causes which gave rise to any *sporadic* or spontaneous disease in one individual, should happen to act equally, and at the same time, upon many individuals, as is not unfrequently the case in catarrhs, inflammations of the chest, agues, remittent fevers, the typhus, cholera, &c. then such a *sporadic* disease is said to be *epidemic*.

3d. When a *sporadic* disease has become *epidemic*, it may, after a certain time, assume an additional character, viz. that of being *infectious*, (or contaminating, which is a more apt expression.) This happens when

\* Sporadic are those diseases which seems to *start up* spontaneously and in small numbers, attacking sometimes one, at other times another individual—which in fact furnish the daily occupation of medical men, and form the 99-100th of all the diseases which afflict mankind. They are not peculiar to any particular nation, and are to be met with in all quarters of the globe.

† Endemic are those diseases which seem to be peculiar to certain localities and certain nations.

many individuals have been affected in succession by a sporadic disease, in the same town, village, district, street, house, prison, or ship; and the circumambient atmosphere has become, from that circumstance, unfit for the healthy exercise of the functions of life: in which case a person exposed to such an atmosphere will feel, more or less, its bad effects by the development of some disease, the type of which will be similar to that of the disease then prevailing; for example, the bilious remittent fever, the typhus gravior, the yellow fever, the jail and camp fever, the cholera, the putrid sore throat, and perhaps the inflammatory and intestinal fevers of lying-in women.

4th. No *infectious* or contaminating epidemic disease can be communicated by *contact*; either direct or indirect, far or near, early or late in the disease.

5th. No individual labouring under an EPIDEMIC, INFECTIOUS, OR CONTAMINATING disease, nor any of his apparel, nor the objects that have been touched by him, are capable, when transported to a healthy place, of conveying the disease to a person in health. These two laws are beautifully illustrated by what happens in regard to aggravated cholera.

Thus far with regard to sporadic and epidemic diseases. Now as to the endemics.

6th. Some of the *endemic* diseases emigrate from their birth place, being carried from place to place, and propagated through *contagion*. The plague, small-pox, leprosy, syphilis, the cow-pox, and some other eruptive complaints are in this predicament.

7th. By *contagion* is meant the action by which a

diseased body, through immediate or mediate contact, communicates its own disease to a body in health, which in its turn conveys it to others by the same means; and so on in succession, without any exception of age, sex, temperament, or mode of life.

8th. A *contagious* disease is that which may be conveyed to a healthy place by any individual labouring under that disease, or by his apparel, or any other thing which has been in contact with some part of his body.

9th. *Contagious* diseases are independent of all influence of the atmosphere. They commit ravages when no possible cause of unhealthiness exists in the air; they are neither checked nor promoted by a difference in the winds; by the winter or the summer; by an elevated or a low topographical situation. They are never, therefore, *epidemic*.

10th. Another specific character of the *contagious* disease is, that it may be communicated by engraftment or inoculation. This alone sufficiently distinguishes *contagious endemics* from *infectious epidemics*, for the latter cannot be inoculated—cholera for instance.

11th. Chemical and other processes for purifying the air will often reduce an *infectious* epidemic to a simple or non-infectious epidemic, and ultimately put a stop even to the latter: so will cleanliness and ventilation. Not so with a *contagious* disease, of which no process whatever can change the character. Fumigations, ventilation, and ablutions have succeeded in checking, and even preventing, the yellow fever, or

the cholera, and in depriving an epidemic typhus of its *infectious* property, whenever it had acquired that character in virtue of the third law; but in the case of the plague, small-pox, &c. no such change has ever been effected by similar operations.

12th. The only mode of prevention from *contagious* diseases, is to avoid the contact of persons suffering from those diseases, and of their garments, or of any thing that has been used by them.

13th. *Segregation* and *insulation* are the surest preservatives from contagious diseases. But no such means can save a person from the influence of *infectious* epidemics. Hence the laws of quarantine are indispensable against the former; and worse than useless in the latter.

☞ These laws were collected, explained, and published by the author twelve years ago, in his work on Plague. Their re-publication at this moment will enable the reader to comprehend the meaning of terms so generally used and mis-used.

THE END.











